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RTD UPDATES: Fertilizer Use and Trade

Data updates for employees and colleagues of the Resources and Technology Division

Resources and Technology Division
Economic Research Service
U.S. Department of Agriculture

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U.S. Fertilizer Use Relatively Stable Since 1984

The sharp upward trend in fertilizer consumption throughout the 1960's and 1970's peaked in 1981 and then reversed. By 1983, the year of the payment-in-kind program, total nutrient use had fallen by almost 25 percent. U.S. fertilizer use rebounded in 1984 along with crop acreage, and has remained relatively stable, ranging from 19.1 million nutrient tons to 21.8 million tons through fertilizer year 1992 (July-June).

U.S. nutrient use is closely tied to planted crop acreage. Fertilizer use also changes as per-acre rates on specific crops change over time. Factors influencing these rates include fertilizer prices, expected crop prices, and government programs. Another factor affecting use is the mix of agricultural plantings. Corn, for example, accounts for more U.S. fertilizer use than any other crop (an estimated 47 percent in 1991).

U.S. trade in fertilizer varies by nutrient. The United States is the world's largest phosphate fertilizer exporter and the world's largest potash importer. It became a net nitrogen importer in 1983.

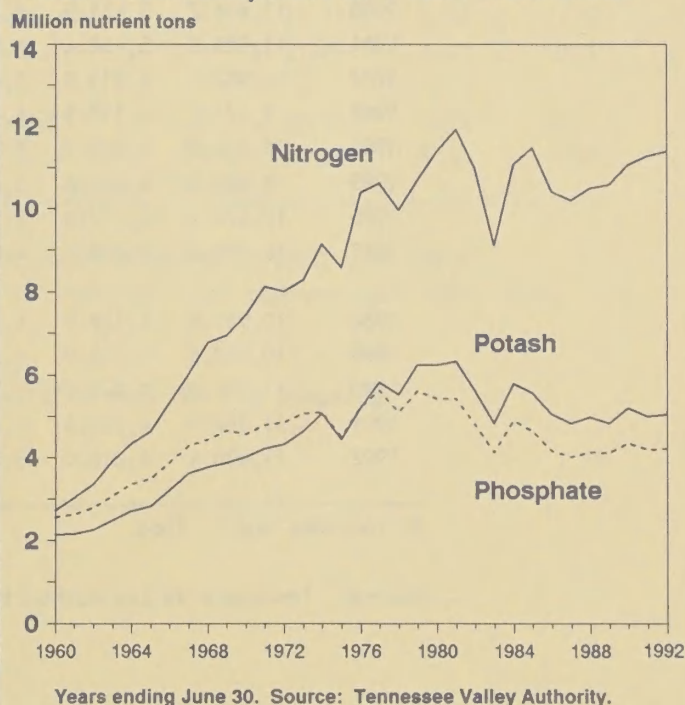
Fertilizer statistics are compiled twice a year for **Agricultural Resources, Inputs Situation and Outlook Report**. These reports are published in February and October by the Economic Research Service (ERS), U.S. Department of Agriculture. Additional reports by ERS containing fertilizer statistics include **Fertilizer Use and Price Statistics, 1960-91** (SB-842) and **Fertilizer Trade Statistics, 1960-91** (SB-851). An electronic database containing fertilizer use and price statistics is also available (#86012).

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Monthly Data Releases Planned

RTD UPDATES, published by the Resources and Technology Division, is a new series of monthly data highlights relating to agricultural resources, the environment, food safety, global change, and technology. Surveys of farm operators and others knowledgeable about changing agricultural resource conditions provide vital information to the RTD research program and are the source of these data highlights. **RTD UPDATES** gives readers recent data acquisitions, with only minimal interpretation or analysis. This quick release of data should enhance your analytical efforts and decisions. Please contact the individual listed in the text of **RTD UPDATES** on the availability and timing of additional information. Different resource and technology issues are featured each month, depending on availability of data.

U.S. Consumption of Plant Nutrients



U.S. consumption of plant nutrients 1/

Year ending June 30	Primary nutrient content				Share of total by nutrient		
	Nitrogen	Phosphate	Potash	Total	Nitrogen	Phosphate	Potash
	----- 1,000 nutrient tons -----				----- Percent -----		
1960	2,738.0	2,572.4	2,153.3	7,463.7	36.68	34.47	28.85
1961	3,030.8	2,645.1	2,168.5	7,844.4	38.64	33.72	27.64
1962	3,370.0	2,807.0	2,270.5	8,447.5	39.89	33.23	26.88
1963	3,929.1	3,072.9	2,503.4	9,505.4	41.34	32.33	26.34
1964	4,352.8	3,377.8	2,729.7	10,460.3	41.61	32.29	26.10
1965	4,638.5	3,512.2	2,834.5	10,985.2	42.22	31.97	25.80
1966	5,326.3	3,897.1	3,221.2	12,444.6	42.80	31.32	25.88
1967	6,027.1	4,304.7	3,641.8	13,973.6	43.13	30.81	26.06
1968	6,787.6	4,453.3	3,792.6	15,033.5	45.15	29.62	25.23
1969	6,957.6	4,665.6	3,891.6	15,514.8	44.84	30.07	25.08
1970	7,459.0	4,573.8	4,035.5	16,068.3	46.42	28.46	25.11
1971	8,133.6	4,803.4	4,231.4	17,168.4	47.38	27.98	24.65
1972	8,022.3	4,863.7	4,326.8	17,212.8	46.61	28.26	25.14
1973	8,295.1	5,085.2	4,648.7	18,029.0	46.01	28.21	25.78
1974	9,157.2	5,098.6	5,082.6	19,338.4	47.35	26.37	26.28
1975	8,600.8	4,506.8	4,453.2	17,560.9	48.98	25.66	25.36
1976	10,411.6	5,227.6	5,209.7	20,848.8	49.94	25.07	24.99
1977	10,647.4	5,629.7	5,833.8	22,110.9	48.15	25.46	26.38
1978	9,964.6	5,096.1	5,526.1	20,586.9	48.40	24.75	26.84
1979	10,714.7	5,605.8	6,244.5	22,565.1	47.48	24.84	27.67
1980	11,406.7	5,431.5	6,245.1	23,083.3	49.42	23.53	27.05
1981	11,923.8	5,434.4	6,319.5	23,677.7	50.36	22.95	26.69
1982	10,983.1	4,813.9	5,630.9	21,427.9	51.26	22.47	26.28
1983	9,127.0	4,137.5	4,831.0	18,095.9	50.44	22.86	26.70
1984	11,092.2	4,901.1	5,796.8	21,790.1	50.90	22.49	26.60
1985	11,492.6	4,657.6	5,552.5	21,702.6	52.95	21.46	25.58
1986	10,424.4	4,177.9	5,052.6	19,654.9	53.04	21.26	25.71
1987	10,209.5	4,008.3	4,836.5	19,054.3	53.58	21.04	25.38
1988	10,511.6	4,128.5	4,972.7	19,612.8	53.60	21.05	25.35
1989	10,592.6	4,116.9	4,838.0	19,547.5	54.19	21.06	24.75
1990	11,076.0	4,344.7	5,202.8	20,623.5	53.71	21.07	25.23
1991	11,286.9	4,200.6	5,001.2	20,488.7	55.09	20.50	24.41
1992	11,400.4	4,210.0	5,045.1	20,655.4	55.19	20.38	24.43

1/ Includes Puerto Rico.

Source: Tennessee Valley Authority.

World and U.S. fertilizer nutrient imports

Year ending June 30	Nitrogen			Phosphate			Potash		
	World	United States	U.S. share	World	United States	U.S. share	World	United States	U.S. share
	Million tons		Percent	Million tons		Percent	Million tons		Percent
1970	7.07	0.86	12.2	2.92	0.27	9.2	9.74	2.65	27.2
1971	7.47	0.93	12.4	2.92	0.28	9.6	10.21	2.51	24.6
1972	7.53	0.84	11.2	3.37	0.33	9.8	11.13	3.09	27.8
1973	8.55	0.88	10.3	3.99	0.31	7.8	12.02	3.19	26.5
1974	8.65	1.07	12.4	4.49	0.32	7.1	14.19	4.11	29.0
1975	8.77	1.20	13.7	4.50	0.27	6.0	14.28	3.85	27.0
1976	8.97	1.22	13.6	4.34	0.22	5.1	13.48	3.91	29.0
1977	9.67	1.84	19.0	4.06	0.25	6.2	15.11	4.96	32.8
1978	11.22	1.87	16.7	4.97	0.23	4.6	16.42	4.95	30.1
1979	13.07	2.17	16.6	6.35	0.24	3.8	16.71	5.09	30.5
1980	13.93	2.57	18.4	6.43	0.24	3.7	17.06	5.40	31.7
1981	14.36	2.80	19.5	7.27	0.22	3.0	17.91	5.23	29.2
1982	13.54	2.57	19.0	6.08	0.20	3.3	17.03	4.91	28.8
1983	14.19	2.77	19.5	7.00	0.13	1.9	16.74	4.51	26.9
1984	16.64	4.02	24.2	7.47	0.10	1.3	17.92	5.29	29.5
1985	18.05	3.73	20.7	9.25	0.14	1.5	19.88	5.48	27.6
1986	18.01	4.14	23.0	9.06	0.11	1.2	18.77	4.87	25.9
1987	18.70	3.81	20.4	8.59	0.11	1.3	19.03	4.35	22.9
1988	20.22	3.98	19.7	10.03	0.16	1.6	21.11	4.74	22.5
1989	21.79	3.21 1/	14.7 1/	10.68	0.07	0.7	21.05	4.07	19.3
1990	22.28	2.43 1/	10.9 1/	11.08	0.07	0.6	20.15	4.16	20.6
1991	NA	3.42 1/	NA	NA	0.05	NA	NA	4.61	NA

NA = Not available.

1/ Reporting of quantity data for anhydrous ammonia was discontinued during calendar year 1989.

Anhydrous ammonia imports from the former Soviet Union are not reported after calendar year 1989. Data for 1989-91 are no longer comparable with earlier years.

Source: United Nations Food and Agriculture Organization and U.S. Department of Commerce.

World and U.S. fertilizer nutrient exports

Year ending June 30	Nitrogen			Phosphate 1/			Potash		
	World	United States	U.S. share	World	United States	U.S. share	World	United States	U.S. share
		Million tons	Percent		Million tons	Percent		Million tons	Percent
1970	7.19	1.33	18.5	2.99	0.85	28.4	9.95	0.68	6.8
1971	7.51	1.08	14.4	3.16	0.90	28.5	10.44	0.62	5.9
1972	7.89	1.03	13.1	3.69	1.10	29.8	11.48	0.66	5.7
1973	8.99	1.51	16.8	4.32	1.42	32.9	12.37	0.92	7.4
1974	8.85	1.27	14.4	4.54	1.58	34.8	13.65	0.95	7.0
1975	8.98	1.12	12.5	4.83	1.86	38.5	14.30	0.85	5.9
1976	7.82	1.24	15.9	4.25	2.18	51.3	13.10	0.91	6.9
1977	9.39	1.25	13.3	4.81	2.50	52.0	15.15	0.99	6.5
1978	11.29	1.78	15.8	6.16	3.29	53.4	16.48	1.00	6.1
1979	13.12	2.47	18.8	7.10	3.85	54.2	17.45	1.00	5.7
1980	13.12	2.64	20.1	7.50	3.93	52.4	17.25	1.05	6.1
1981	14.50	3.13	21.6	8.27	4.41	53.3	18.43	1.03	5.6
1982	12.74	2.50	19.6	7.11	3.75	52.7	16.43	0.61	3.7
1983	13.47	2.00	14.8	7.91	3.92	49.6	15.73	0.62	3.9
1984	15.30	2.05	13.4	9.00	4.33	48.1	18.22	0.53	2.9
1985	18.37	3.20	17.4	10.26	5.53	53.9	18.86	0.59	3.1
1986	16.84	2.05	12.2	8.41	3.16 2/	37.6 2/	18.39	0.49	2.7
1987	19.18	2.71	14.1	10.52	4.28 2/	40.7 2/	19.36	0.65	3.4
1988	20.32	3.03	14.9	11.04	4.11 2/	37.2 2/	20.46	0.54	2.6
1989	21.51	2.73 3/	12.7 3/	11.32	4.80 2/	42.4 2/	20.39	0.40	2.0
1990	22.22	2.95 3/	13.3 3/	11.84	5.49	46.4	19.25	0.39	2.0
1991	NA	3.37	NA	NA	5.57	NA	NA	0.63	NA

NA = Not available.

1/ Does not include phosphate rock.

2/ Includes both wet-process phosphoric acid and superphosphoric acid. Reporting of superphosphoric acid exports were discontinued during July 1985-December 1988. Data for 1986-89 are no longer comparable with other years.

3/ Reporting of quantity data for anhydrous ammonia was discontinued during calendar year 1989. Data for 1989-90 are no longer comparable with other years.

Source: United Nations Food and Agriculture Organization and U.S. Department of Commerce.

RTD UPDATES

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